

Trend Study 13A-16-04

Study site name: Beaver Creek.

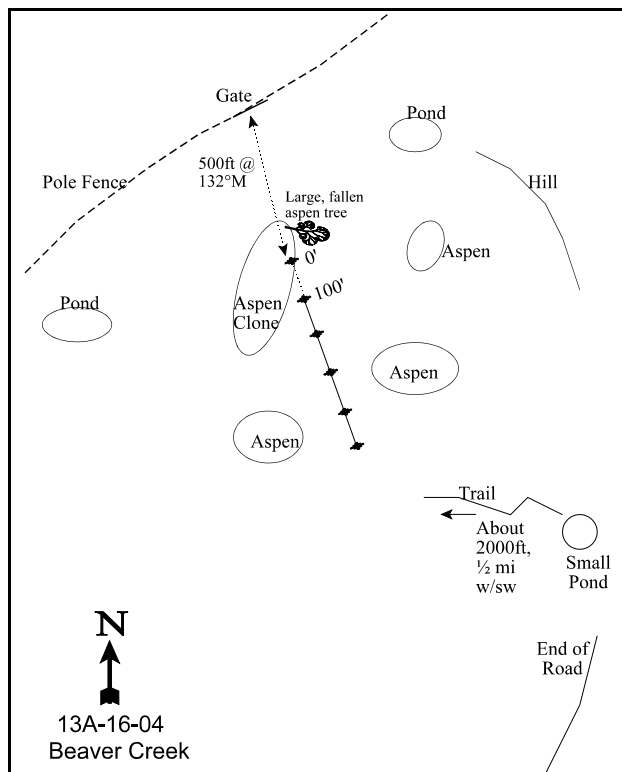
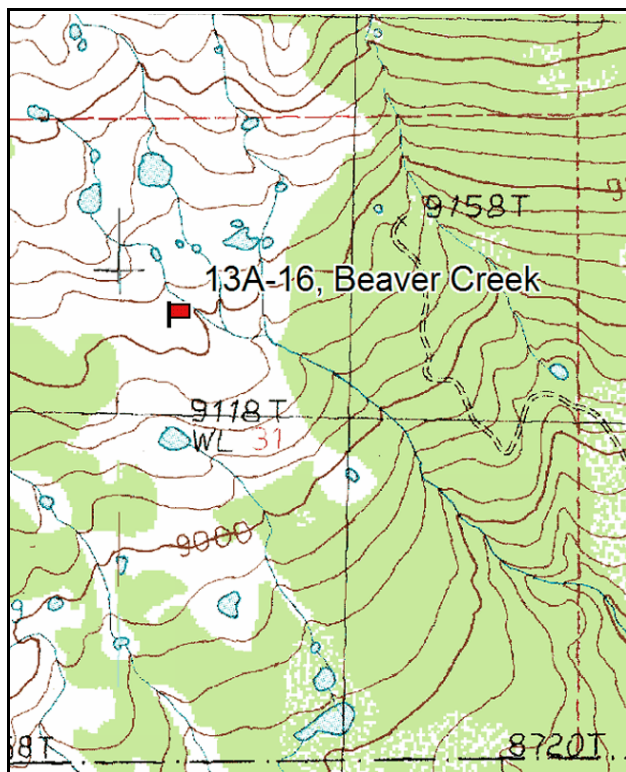
Vegetation type: Aspen Meadow.

Compass bearing: frequency baseline 122 degrees magnetic.

Frequency belt placement: line 1 (11ft), line 2 (34ft), line 3 (59ft), line 4 (71ft), line 5 (95ft).

LOCATION DESCRIPTION

On SR 46, travel northeast past LaSal to mile marker 12. Continue 0.75 miles to the LaSal Pass road. Turn left and go 1.9 miles to a fork just beyond the Forest Service boundary cattleguard. Bear left and go 0.05 miles to a canal. Continue 0.7 miles to a fork by the canal. Stay right, go 0.1 miles to a fork. Stay left and proceed 0.4 miles to another fork. Stay right on main road and continue 0.8 miles to the LaSal Creek crossing. Continue 1.0 mile to a cattleguard. Continue 0.8 miles to a fork. Stay right and continue 0.11 more miles to another fork. Go right and drive to the end of the road. Then follow the trail to an open area and walk west up the hill to the site. Use a GPS unit to navigate. The 0-foot stake is marked by browse tag #161.



Map Name: Mount Peale

Diagrammatic Sketch

Township 27S, Range 25E, Section 31

GPS: NAD 27, UTM 12S 4253213 N, 656550 E

DISCUSSION

Beaver Creek - Trend Study No. 13A-16

Beaver Creek was established in 2004 to replace East La Sal Pass (13A-2) study site. This site is located just southeast of Mount Peale and is located on state land. It samples an aspen meadow that receives high elk and livestock use in the spring/summer. Pellet group data from 2004 estimated 42 elk (104 edu/ha), 5 deer (13 ddu/ha), and 66 cow days use/acre (163 cdu/ha). Elk were observed near the site in 2004. The site has an elevation of 9,000 feet with a south aspect and a slope of about 10-12%.

The soil is classified as a loam. Soil on the site appears to be moderately deep (effective rooting depth of almost 16 inches) with few rock or pavement on the surface, but abundant a few inches below the surface. Soil pH is moderately acidic (5.6) with good amounts of phosphorous and potassium. Organic matter is abundant at 6%. The site has good vegetative cover (60%), while 76% of the vegetative cover comes from herbaceous species. Herbaceous cover gives the best protection for soils from high intensity summer storms. Percent bare ground is minimal, most exposed soil was from gofer activity. The erosion condition class was determined to be stable in 2004.

Snowberry forms the dominant shrub cover on this open site which comprises 76% of the shrub cover in 2004. The plants are vigorous with light to no use. Because of the elevation and not generally used as a winter range, browse is not a critical component for this site. The browse only makes up approximately 24% of the total vegetative cover. Other browse species found on the site include: Utah juniper, Gambel oak, aspen, Gooseberry currant, and Wood's rose. Most of the aspen are large and old, with very little young recruitment.

Herbaceous vegetation forms a diverse and dense understory. Forbs are abundant with them providing almost 39% of the total vegetative cover. The most common species include: Pacific aster, western yarrow, Silky lupine, and common dandelion. These species provide valuable summer forage for wildlife. Grasses are also quite dense providing 37% of the vegetative cover. Kentucky bluegrass, an increaser with moderate to heavy grazing, makes up the bulk of the grass cover. Other common species include Mountain brome, Intermediate wheatgrass, and Subalpine needlegrass. The majority of the herbaceous species, especially the forbs, on this site are increasers with heavy grazing. The dense herbaceous understory accounts for 76% of the total vegetative cover.

2004 APPARENT TREND ASSESSMENT

Soil shows no sign of erosion due to extensive vegetative and litter cover. Very little pavement or rock on surface, but is abundant within the profile, meaning little active erosion. Browse species are not a critical component of this spring/summer range, although young aspen may provide forage. Only mature aspen trees were encountered suggesting that young trees are most likely being browsed. Understory vegetation has good ground cover, which is dominated by Kentucky bluegrass, mountain brome, and intermediate wheatgrass. Forbs are also abundant in the understory and provide valuable forage.

HERBACEOUS TRENDS --

Management unit 13A, Study no: 16

Type	Species	Nested Frequency	Average Cover %
		'04	'04
G	Agropyron trachycaulum	70	1.64

T y p e	Species	Nested Frequency	Average Cover %
		'04	'04
G	<i>Bromus anomalus</i>	13	.36
G	<i>Bromus carinatus</i>	64	1.17
G	<i>Carex</i> spp.	21	.53
G	<i>Dactylis glomerata</i>	6	.03
G	<i>Poa pratensis</i>	320	17.14
G	<i>Stipa columbiana</i>	59	2.28
G	<i>Stipa lettermani</i>	5	.06
Total for Annual Grasses		0	0
Total for Perennial Grasses		558	23.26
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F	<i>Achillea millefolium</i>	167	4.25
F	<i>Agoseris glauca</i>	2	.00
F	<i>Androsace septentrionalis</i> (a)	3	.01
F	<i>Aster chilensis</i>	184	6.17
F	<i>Chenopodium fremontii</i> (a)	53	.44
F	<i>Cirsium</i> spp.	17	.64
F	<i>Crepis acuminata</i>	5	.01
F	<i>Cymopterus</i> spp.	13	1.49
F	<i>Descurainia pinnata</i> (a)	58	1.50
F	<i>Draba</i> spp. (a)	15	.10
F	<i>Erigeron flagellaris</i>	1	.00
F	<i>Geranium</i> spp.	12	.10
F	Labiatae	3	.04
F	<i>Lathyrus brachycalyx</i>	53	1.30
F	<i>Lappula occidentalis</i> (a)	7	.16
F	<i>Lepidium</i> spp. (a)	10	.07
F	<i>Lupinus argenteus</i>	48	4.59
F	<i>Potentilla</i> spp.	25	.71
F	<i>Stellaria jamesiana</i>	23	.28
F	<i>Swertia perennis</i>	2	.63
F	<i>Taraxacum officinale</i>	143	2.11
F	<i>Tragopogon dubius</i>	5	.03
Total for Annual Forbs		146	2.29
Total for Perennial Forbs		703	22.40
Total for Forbs		849	24.70

Values with different subscript letters are significantly different at $\alpha = 0.10$

BROWSE TRENDS --

Management unit 13A, Study no: 16

T y p e	Species	Strip Frequency '04	Average Cover % '04
B	Juniperus osteosperma	-	1.99
B	Populus tremuloides	8	.53
B	Quercus gambelii	1	.41
B	Ribes montigenum	1	.30
B	Rosa woodsii	7	.36
B	Symphoricarpos oreophilus	48	11.50
Total for Browse		65	15.10

CANOPY COVER, LINE INTERCEPT --

Management unit 13A, Study no: 16

Species	Percent Cover '04
Populus tremuloides	24.23
Quercus gambelii	.60
Ribes montigenum	1.45
Rosa woodsii	.58
Symphoricarpos oreophilus	24.36

BASIC COVER --

Management unit 13A, Study no: 16

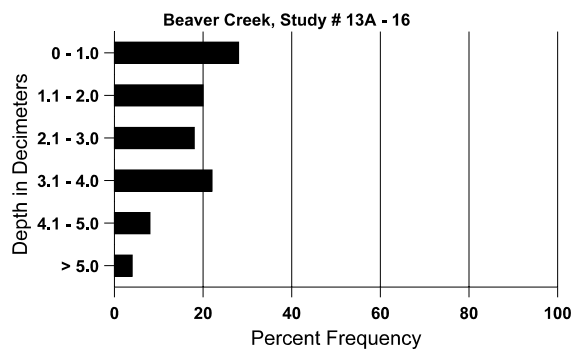
Cover Type	Average Cover % '04
Vegetation	60.12
Rock	.33
Litter	46.62
Bare Ground	7.81

SOIL ANALYSIS DATA --

Management unit 13A, Study no: 16, Study Name: Beaver Creek

Effective rooting depth (in)	Temp °F (depth)	pH	%sand	%silt	%clay	%OM	PPM P	PPM K	ds/m
15.6	48.4 (17.8)	5.6	46.3	34.4	19.3	6.3	28.1	515.2	0.6

Stoniness Index



PELLET GROUP DATA --

Management unit 13A, Study no: 16

Type	Quadrat Frequency	Days use per acre (ha)
	'04	'04
Elk	2	42 (104)
Deer	-	5 (13)
Cattle	18	66 (163)

BROWSE CHARACTERISTICS --

Management unit 13A, Study no: 16

		Age class distribution (plants per acre)					Utilization					
Y	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
Populus tremuloides												
04	200	-	140	60	-	-	10	30	-	-	0	-/-
Quercus gambelii												
04	40	-	40	-	-	-	0	0	-	-	0	13/7
Ribes montigenum												
04	20	-	-	20	-	-	0	0	-	-	0	34/86
Rosa woodsii												
04	380	-	-	380	-	-	0	0	-	-	0	13/10
Symphoricarpos oreophilus												
04	2080	40	140	1920	20	-	0	0	1	-	0	30/47